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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,123	05/11/2001	Junichi Takeuchi	14617	7415
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SCULLY SCOTT MURPHY & PRESSER, PC 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			SCHEIBEL, ROBERT C	
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			2666	

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,123

Applicant(s)

TAKEUCHI ET AL.

Examiner

Robert C. Scheibel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see paragraph 3 of page 2 of the Remarks section, filed 4/20/2005, with respect to the objection to the specification have been fully considered and are persuasive. The objection to the specification has been withdrawn.
2. Applicant's arguments, see paragraph 3 of page 2 of the Remarks section, filed 4/20/2005, with respect to the objection to Figure 2 have been fully considered and are persuasive. The objection to Figure 2 has been withdrawn.
3. Applicant's arguments, see pages 2 and 3 of the Remarks section, filed 4/20/2005, with respect to the rejection of claims 1, 8, and 15 under 35 U.S.C. 102(a) have been fully considered and are persuasive. The applicant has argued that since the publication date of the reference relied upon for this rejection (IEEE 1394a) is later than the foreign filing of the application, the reference cannot be used. The rejection of claims 1, 8, and 15 under 35 U.S.C. 102(a) has been withdrawn.
4. Applicant's arguments, see pages 3-5 of the Remarks section, filed 4/20/2005, with respect to the rejection of claims 1-5, 8-12, and 15-19 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive. Applicant summarizes the rejection in the first full paragraph of page 3 of the Remarks section. Applicant then provides a brief summary of relevant parts of the Luddy reference. Applicant then argues that the Luddy reference does not ignore the signal. However, examiner respectfully disagrees with this assertion. The present claim language is broad and in view of the broadest reasonable interpretation of this language, Luddy does in fact disclose the ignoring step. As indicated in the previous office action, the

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selective suppressing of the confirmation tone (lines 3-8 of column 2) discloses the step of ignoring signals. To explain further, this suppression of signals is carried out in the answering tone blocker 314 of the base station controller as indicated in Figure 5. Through the answering tone blocker, the base station controller is effectively ignoring the answering tone signal by not processing the signal for a period of time. Applicant has amended the claim to add the limitation that the signals are ignored by masking them. The term masking is a very general term and it is well known in the art that masked signals or inputs are those which are not processed. Thus, Luddy is ignoring or masking the answering tone in element 314 by blocking it for a period of time.

Applicant further argues that the combination of AAPA and Luddy does not teach the limitations of claims 2, 9, and 16. Applicant essentially argues that since the AAPA does not disclose the ignoring step, it cannot teach the sending of signals relative to the ignoring step. Examiner respectfully disagrees with this argument for the following reasons.

First, the applicant appears to be arguing the original claim language that the constant signals are sent during the ignoring step, while the amended claim states that the constant signals are sent after the ignoring. However, the specification does not appear to support the amended language of claims 2, 9, and 16 as all discussion of constant signals describes these signals being sent during the time interval during which the signals are ignored. Accordingly, claims 2, 9, and 16 are rejected below under 35 U.S.C. 112, first paragraph, as containing new matter.

Second, the limitation of constant signals is broad and can be reasonably interpreted as a number of different signals. Due to the amendment of claims 2, 9, and 16, however, the rejection of these claims has been modified to use the teaching of Luddy to explain how the combination

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of AAPA and Luddy discloses the new limitations. Blocks 214 and 218 of Figure 4 of Luddy disclose the transmission of constant data and these blocks occur after the ignoring step (which occurs during block 210 of Figure 4).

5. Applicant's arguments, see pages 5-6 of the Remarks section, filed 4/20/2005, with respect to the rejection of claims 6-7, 13-14, and 20-21 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive. Applicant summarizes the rejection and then states that these claims are allowable because of the previous arguments regarding claims 1-5, 8-12, and 15-19. Examiner respectfully disagrees for the reasons stated above.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2, 9, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the original specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention; the claims are thus rejected as containing new matter. The specification discusses constant signals in several places. However, in all of these places, the constant signals are sent while the receiver is ignoring signals rather than "after the ignoring step" as stated in claim 2 (and in similar language in claims 9 and 16). As such, the specification only supports sending constant signals *while* the receiver is ignoring signals and not *after* the ignoring step. Applicant must remove the new matter from the claims to overcome this rejection.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims **1-5, 8-12, and 15-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Patent 5,953,346 to Luddy.

Regarding claim **1, 8, and 15** AAPA discloses the limitations of claim 1 as follows: a method of establishing data communication between two subsystems via a communication cable in a communication system, the data communication being established after a predetermined connection procedure between the subsystems via the communication cable, comprising the steps of: connecting two subsystems with each other via the communication cable (see the first sentence of the third paragraph of page 1); recognizing physical connection between the two subsystems by the two subsystems (see the first sentence of the second full paragraph of page 2; the two subsystems must recognize physical connection if they are able to perform the

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connection procedure immediately after the cable is connected); executing the connection procedure by the two subsystems (see the second paragraph on page 1); and establishing data communication between the two subsystems (see the first sentence of paragraph 1 of page 1 which describe that communication is established between these two subsystems). Similarly, regarding claims **8 and 15**, AAPA discloses the physical layer interface as described above.

AAPA does not disclose expressly the limitation of claim 1 of ignoring signals from one of the two subsystems by the other for a predetermined time period from the recognizing step. AAPA also does not disclose the limitation of claims 8 and 15 of the protection circuit for ignoring signals.

Luddy discloses the limitation of ignoring signals from one of the two subsystems by the other for a predetermined time period from the recognizing step in lines 3-8 of column 2. The suppression of the confirmation tone is the ignoring step and discloses the function of the protection circuit. To explain further, this suppression of signals is carried out in the answering tone blocker 314 of the base station controller as indicated in Figure 5. Through the answering tone blocker, the base station controller is effectively ignoring the answering tone signal by not processing the signal for a period of time. Additionally, the term masking is a very general term and it is well known in the art that masked signals or inputs are those which are not processed. Thus, Luddy is ignoring or masking the answering tone in element 314 by blocking it for a period of time. AAPA and Luddy are analogous art because they are from the same field of endeavor of communications systems which require rate arbitration. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the AAPA to add the step of suppressing acknowledgements in the arbitration process, thereby ignoring the originally

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transmitted signal corresponding to the acknowledgement. The motivation for doing so would have been to allow the system to reliably transport encoded data when precise synchronization does not exist as suggested by Luddy in lines 8-10 of column 2. Therefore, it would have been obvious to combine Luddy with AAPA for the benefit of providing reliable communication in the absence of precise synchronization to obtain the invention as specified in claims 1, 8, and 15.

Regarding claims **2, 9, and 16**, the combination of AAPA and Luddy described above discloses the limitation of sending constant signals after the ignoring step. Figure 4 of Luddy discloses this limitation. The ignoring step is performed by the answering tone blocker which is performed in step 210 of Figure 4. After this step, blocks 214 and 218 disclose sending constant signals between the two stations. The further limitation of claims 9 and 16 that the physical layer interface circuit recognizes physical connection with the other device is disclosed in paragraph 2 of page 1 of AAPA. The device would not be able to initiate the predetermined connection procedure when the cable is connected without recognizing the physical connection.

Regarding claims **3, 10, and 17**, the limitation that the connection procedure comprises arbitration of transmission rate is disclosed in the second sentence of paragraph 2 of page 1.

Regarding claims **4, 11, and 18**, the limitations that the arbitration comprises the steps of: informing one of the subsystems of the other subsystem's transmission rate and lowering higher transmission rate to lower transmission rate so as to be correspondent transmission rates of the two subsystems with each other are disclosed by AAPA in the first full paragraph of page 2.

Regarding claims **5, 12, and 19**, the limitation that the arbitration further comprises the step of sending an acknowledgement signal from one of the subsystems to the other when the subsystem recognizes the correspondence of the transmission rate is inherent in the AAPA as

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described in the first full paragraph of page 2 for example. In order for the two subsystems to agree on a rate, each side must be aware of the selected rate. This requires a handshaking scheme between the two subsystems and, at a minimum, requires one subsystem to select a rate from an advertised capability (of the other subsystem) and acknowledge the advertised capability with this selection to the other subsystem.

11. Claims 6-7, 13-14, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Patent 5,953,346 to Luddy as applied to claims 1, 8, and 15 above, and further in view of "NEC looks to lead long-haul 1394 standards efforts" from EE Times by Hara (hereinafter "Hara").

AAPA and Luddy disclose all the limitations of parent claims 1, 8, and 15 as described above. However, AAPA and Luddy do not disclose expressly the limitations of claims 6-7, 13-14, and 20-21. Hara discloses the limitations of claims 6, 13, and 20 that the communication system is an optical communication system in the sixth paragraph (starting with "The chip has three operating modes..."). This paragraph discloses that the chip described in the article supports connection with plastic optical fiber cables; using this chip with plastic optical fiber discloses the limitation that the system is an optical communications system. Similarly, Hara discloses the limitations of claims 7, 14, and 21 in the sixth paragraph as described above.

AAPA, as modified by Luddy, and Hara are analogous art because they are from the same field of endeavor of high-speed serial communications (the IEEE 1394 standard is very similar to the generic system described in the background section of the present invention.) At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify AAPA to use a plastic optical fiber cable to allow the use of longer transmission distances and thus enable

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it's use in long-haul applications. The motivation for doing so would have been to enable the use of longer transmission distances as suggested by Hara in the third and eighth paragraphs.

Therefore, it would have been obvious to combine Hara with AAPA, as modified, for the benefit of longer transmission distances to obtain the invention as specified in claims 6-7, 13-14, and 20-21.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 7-21-05

Robert C. Scheibel
Examiner
Art Unit 2666

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